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06930238 Genuine Article#: 104UD Number of References: 13

**Title: Contribution of the magnetic field induced by the current passing
through a spin-valve element**

Author(s): Portier X (REPRINT) ; PetfordLong AK; Anthony TC; Brug JA
Corporate Source: UNIV OXFORD, DEPT MAT, PARKS RD/OXFORD OX1 3PH//ENGLAND/
(REPRINT); HEWLETT PACKARD LABS,/PALO ALTO//CA/94304

Journal: JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, 1998, V187, N2 (AUG)
, P145-153

ISSN: 0304-8853 Publication date: 19980800

Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS

Language: English Document Type: ARTICLE

Geographic Location: ENGLAND; USA

Subfile: CC PHYS--Current Contents, Physical, Chemical & Earth Sciences

Journal Subject Category: MATERIALS SCIENCE; PHYSICS, CONDENSED MATTER

Abstract: In situ experiments in a Lorentz microscope have been performed
on active spin-valve elements, and a correlation between
magnetoresistance and the magnetic domain structure is shown. The
presence of a magnetic field induced by the applied current is clearly
demonstrated. A simple model is presented, which is in good agreement
with the experimental data. In addition, the effect of stray-held
coupling between the ferromagnetic layers, arising because of the free
magnetic poles at the **edges** of the element, has been observed. (C)
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QC750.36

Descriptors--Author Keywords: spin valves ; giant magnetoresistance ;
Lorentz microscopy

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05210396 Genuine Article#: VH392 Number of References: 39

Title: MAGNETIC RECORDING HEAD MATERIALS

Author(s): BRUG JA ; ANTHONY TC; NICKEL JH

Journal: MRS BULLETIN, 1996, V21, N9 (SEP), P23-27

ISSN: 0883-7694

Language: ENGLISH Document Type: ARTICLE

Subfile: SciSearch; CC PHYS--Current Contents, Physical, Chemical & Earth
Sciences; CC ENGI--Current Contents, Engineering, Technology & Applied
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Journal Subject Category: MATERIALS SCIENCE; PHYSICS, APPLIED

Identifiers--KeyWords Plus: SPIN-VALVE STRUCTURES; GIANT MAGNETORESISTANCE;
FILMS; FE; MULTILAYERS; TEMPERATURE; TRANSPORT; SYSTEMS

Research Fronts: 94-1579 007 (GIANT MAGNETORESISTANCE; MAGNETIC
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SENSORS)

94-1811 001 (MAGNETIC SUPERLATTICES; TB/FE MULTILAYERS; GIANT
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STRUCTURAL-PROPERTIES OF CO/COO BILAYERS)

94-6789 001 (FETAN FILMS; TUNNELING **STABILIZED** MAGNETIC FORCE
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DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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03303255 Genuine Article#: NU012 Number of References: 13

Title: DUAL STRIPE MAGNETORESISTIVE HEADS FOR HIGH-DENSITY RECORDING

Author(s): ANTHONY TC; NABERHUIS SL; BRUG JA ; BHATTACHARYYA MK; TRAN LT;
HESTERMAN VW; LOPATIN GG

Corporate Source: HEWLETT PACKARD CORP,1501 PAGE MILL RD/PALO
ALTO//CA/94304

Journal: IEEE TRANSACTIONS ON MAGNETICS, 1994, V30, N2 (MAR), P303-308

ISSN: 0018-9464

Language: ENGLISH Document Type: ARTICLE

Geographic Location: USA

Subfile: SciSearch; CC PHYS--Current Contents, Physical, Chemical & Earth
Sciences; CC ENGI--Current Contents, Engineering, Technology & Applied
Sciences

Journal Subject Category: ENGINEERING, ELECTRICAL & ELECTRONIC; PHYSICS,
APPLIED

Abstract: The design and recording performance of dual stripe
magnetoresistive read/inductive write heads with read widths of 4 mum
and write widths of 4.5 mum are described. A linear density of 75 kfc
(D50) was measured in heads with shield-to-shield spacing of 420 nm and
70 nm of dielectric separating the two magnetoresistive stripes. Large
signal amplitude, linear cross-track profile, and good second harmonic
suppression are observed in accordance with theoretical expectations.
Readback waveforms contain little baseline shift and the ratio of
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signals are seen for heads with and without exchange **stabilization**.
Conductor topography in the read head is replicated in the write head
and can adversely affect cross-track behavior.
Non-planarity of the write head must be considered in the design of
shared pole magnetoresistive heads.

Research Fronts: 92-0191 001 (NONLINEAR FADING MOBILE SATELLITE CHANNELS;
CODE PERFORMANCE IN DIGITAL MAGNETIC RECORDING; CODING USING PRECODING;
TRELLIS SHAPING; MR INDUCTIVE HEAD)

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YEH N, 1982, V18, P1155, IEEE T MAGN
YUAN SW, 1993 INT MAGN C

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06930238 Genuine Article#: 104UD Number of References: 13

Title: Contribution of the magnetic field induced by the current passing through a spin-valve element

Author(s): Portier X (REPRINT) ; PetfordLong AK; Anthony TC ; Brug JA
Corporate Source: UNIV OXFORD,DEPT MAT, PARKS RD/OXFORD OX1 3PH//ENGLAND/
(REPRINT); HEWLETT PACKARD LABS,/PALO ALTO//CA/94304

Journal: JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, 1998, V187, N2 (AUG)
, P145-153

ISSN: 0304-8853 Publication date: 19980800

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Language: English Document Type: ARTICLE

Geographic Location: ENGLAND; USA

Subfile: CC PHYS--Current Contents, Physical, Chemical & Earth Sciences

Journal Subject Category: MATERIALS SCIENCE; PHYSICS, CONDENSED MATTER

Abstract: In situ experiments in a Lorentz microscope have been performed on active spin-valve elements, and a correlation between magnetoresistance and the magnetic domain structure is shown. The presence of a magnetic field induced by the applied current is clearly demonstrated. A simple model is presented, which is in good agreement with the experimental data. In addition, the effect of stray-held coupling between the ferromagnetic layers, arising because of the free magnetic poles at the **edges** of the element, has been observed. (C) 1998 Elsevier Science B.V. All rights reserved.

Descriptors--Author Keywords: spin valves ; giant magnetoresistance ; Lorentz microscopy

Cited References:

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DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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06262571 Genuine Article#: YF147 Number of References: 24

Title: Nonlinear predictive control of spacecraft

Author(s): Crassidis JL (REPRINT) ; Markley FL; **Anthony TC** ; Andrews SF

Corporate Source: CATHOLIC UNIV AMER, DEPT MECH ENGN/WASHINGTON//DC/20064
(REPRINT); NASA, GODDARD SPACE FLIGHT CTR, GUIDANCE NAVIGAT & CONTROL
BRANCH/GREENBELT//MD/20771

Journal: JOURNAL OF GUIDANCE CONTROL AND DYNAMICS, 1997, V20, N6 (NOV-DEC)
, P1096-1103

ISSN: 0731-5090 Publication date: 19971100

Publisher: AMER INST AERONAUT ASTRONAUT, 1801 ALEXANDER BELL DRIVE, STE
500, RESTON, VA 22091

Language: English Document Type: ARTICLE

Geographic Location: USA

Subfile: CC ENGI--Current Contents, Engineering, Computing & Technology

Journal Subject Category: INSTRUMENTS & INSTRUMENTATION; AEROSPACE
ENGINEERING & TECHNOLOGY

Abstract: A new approach for the control of a spacecraft with large-angle maneuvers is presented. This new approach is based on a nonlinear predictive control scheme that determines the required torque input so that the predicted responses match the desired trajectories. This is accomplished by minimizing the norm-squared local errors between the predicted and desired quantities. Formulations that use either attitude and rate tracking or attitude tracking alone are presented. The robustness of the new controller with respect to large system uncertainties is also demonstrated. Finally, simulation results that use the new control strategy to **stabilize** the motion of the Microwave Anisotropy Probe spacecraft are shown.

Identifiers--Keyword Plus(R): LARGE-ANGLE MANEUVERS; ATTITUDE MANEUVERS;
RIGID SPACECRAFT; FEEDBACK; SYSTEMS

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DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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05210396 Genuine Article#: VH392 Number of References: 39

Title: **MAGNETIC RECORDING HEAD MATERIALS**

Author(s): BRUG JA; **ANTHONY TC** ; NICKEL JH

Journal: MRS BULLETIN, 1996, V21, N9 (SEP), P23-27

ISSN: 0883-7694

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Journal Subject Category: MATERIALS SCIENCE; PHYSICS, APPLIED

Identifiers--KeyWords Plus: SPIN-VALVE STRUCTURES; GIANT MAGNETORESISTANCE;
FILMS; FE; MULTILAYERS; TEMPERATURE; TRANSPORT; SYSTEMS

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MULTILAYERS; INTERLAYER EXCHANGE COUPLING)

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03303255 Genuine Article#: NU012 Number of References: 13

Title: **DUAL STRIPE MAGNETORESISTIVE HEADS FOR HIGH-DENSITY RECORDING**

Author(s): ANTHONY TC ; NABERHUIS SL; BRUG JA; BHATTACHARYYA MK; TRAN LT;
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Corporate Source: HEWLETT PACKARD CORP,1501 PAGE MILL RD/PALO
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ISSN: 0018-9464

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